

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

IN THE CLAIMS

The status of the claims as presently amended is as follows:

1. (Currently Amended) An image forming apparatus comprising:

a image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

a plurality of image adjusting devices that adjust Image forming conditions of said image forming unit, said image adjusting devices including a first image adjusting device and a second image adjusting device;

a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

a detecting device that detects the detection patterns formed on said endless belt and a quantity of reflection light from said endless belt itself; and

a correction device that corrects the detection patterns detected by said detecting device based on the quantity of reflection light from said endless belt itself detected by said detecting device;

wherein:

said first image adjusting device adjusts one of the image forming conditions of said image forming unit based on the corrected detection result of the detection patterns;

said second image adjusting device adjusts another one of the image forming conditions of said image forming unit; and

said detecting device detects the quantity of reflection light from said endless belt itself in timing synchronous with the adjustment of the other one of the image forming conditions by said second image adjusting device, other than at which the one of the image forming conditions is adjusted by said first image adjusting device.

2. (Original) An image forming apparatus according to claim 1, wherein said detecting device

SN.10/673,918

ATTORNEY DOCKET No. CANO:092

detects density patches formed on said endless belt as the predetermined detection patterns, and said first image adjusting device adjusts the one of the image forming conditions of said image forming unit based on the detected density patches, to adjust density of an image to be formed.

3. *(Original)* An image forming apparatus according to claim 2, wherein said first image adjusting device carries out one of image density control that maintains respective maximum densities of a plurality of predetermined colors constant and image density control that maintains gradation characteristics of halftone linear with respect to an image signal obtained by reading an image on an original.

4. *(Original)* An image forming apparatus according to claim 1, wherein said second image adjusting device comprises a device that rotates said endless belt, and a device that forms images on said endless belt at locations other than locations at which the predetermined detection patterns are formed.

5. *(Original)* An image forming apparatus according to claim 2, wherein said second image adjusting device comprises an image writing position adjusting device that adjusts a writing position for an image.

6. *(Currently Amended)* An image forming apparatus comprising:

an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

a detecting device that detects the detection patterns formed on said endless belt and a

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

quantity of reflection light from said endless belt itself;

a correction device that corrects the detection patterns detected by said detecting device based on the quantity of reflection light from said endless belt itself detected by said detecting device; and

an image adjusting device that adjusts at least one image forming condition of said image forming unit based on the corrected detection result of the detection patterns;

wherein said detecting device detects the quantity of reflection light from said endless belt itself in timing ~~different from timing in~~ earlier than at which the at least one image forming condition is adjusted by said image adjusting device.

7. *(Original)* An image forming apparatus according to claim 6, wherein said detecting device detects density patches formed on said endless belt as the predetermined detection patterns, and said image adjusting device adjusts the at least one image forming condition of said image forming unit based on the detected density patches, to adjust density of an image to be formed.

8. *(Original)* An image forming apparatus according to claim 7, wherein said image adjusting device carries out one of image density control that maintains respective maximum densities of a plurality of predetermined colors constant and image density control that maintains gradation characteristics of halftone linear with respect to an image signal obtained by reading an image on an original.

9. *(Currently Amended)* An image forming apparatus according to claim 6, wherein the timing ~~different from the in which~~ earlier than at which the ~~other at least one of the~~ image forming condition[[s]] is adjusted is ~~timing in~~ at which said endless belt is rotating and at a same time images are formed on said endless belt at locations other than locations at which the predetermined detection patterns are formed.

10. *(Original)* An image forming apparatus according to claim 1 or 6, wherein said endless belt is an intermediate transfer belt.

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

11. *(Currently Amended)* A storage device storing a computer program for controlling an image forming apparatus including an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred, the program comprising:

a plurality of image adjusting modules for adjusting image forming conditions of said image forming unit, said image adjusting modules including a first image adjusting module and a second image adjusting module:

a detection pattern forming module for controlling said image forming unit to form predetermined detection patterns on said endless belt;

a first detecting module for detecting the detection patterns formed on said endless belt;

a second detecting module for detecting a quantity of reflection light from said endless belt itself; and

a correction module for correcting the detection patterns detected by said first detecting module based on the quantity of reflection light from said endless belt itself detected by said second detecting module;

wherein:

said first image adjusting module adjusts one of the image forming conditions of said image forming unit based on the corrected detection result of the detection patterns;

said second image adjusting module adjusts another one of the image forming conditions of said image forming unit; and

said second detecting module detects the quantity of reflection light from said endless belt itself in timing synchronous with the adjustment of the other one of the image forming conditions by said second image adjusting module, other than at which the one of the image forming conditions is adjusted by said first image adjusting module.

12. *(Currently Amended)* A storage device storing a computer program for controlling an image forming apparatus including an image forming unit including an image carrier disposed to be

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred, the program comprising:

- a detection pattern forming module for controlling said image forming unit to form predetermined detection patterns on said endless belt;

- a first detecting module for detecting the detection patterns formed on said endless belt;

- a second detecting module for detecting a quantity of reflection light from said endless belt itself;

- a correction module for correcting the detection patterns detected by said first detecting module based on the quantity of reflection light from said endless belt itself detected by said second detecting module; and

- an image adjusting module for adjusting at least one image forming condition of said image forming unit based on the corrected detection result of the detection patterns;

- wherein said second detecting module detects the quantity of reflection light from said endless belt itself in timing ~~different from timing~~ earlier than at which the at least one image forming condition is adjusted by said image adjusting module.

13. (*Currently Amended*) An image forming apparatus comprising:

- an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

- a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

- a detecting device that detects the detection patterns formed on said endless belt and a quantity of reflection light from said endless belt;

- a correction device that corrects the detection patterns detected by said detecting device

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

based on the quantity of reflection light from said endless belt detected by said detecting device;
and

an image adjusting device that adjusts at least one image forming condition of said image forming unit based on the corrected detection result of the detection patterns;

wherein:

said image adjusting device includes an image writing position adjusting device that adjusts a writing position for an image; and

said detecting device detects the quantity of reflection light from said endless belt in timing different from ~~timing-in~~ at which the at least one image forming condition is adjusted by said image adjusting device, by detecting the quantity of reflection light upon turning-on of power of the image forming apparatus or in synchronism with the adjustment of the writing position for an image.

14. (New) An image forming apparatus comprising:

an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

a first detecting device that detects the detection patterns formed on said endless belt and a quantity of reflection light from said endless belt itself;

a second detecting device that is disposed at a location different from a location at which said first detecting device is disposed and detects the detection patterns formed on said endless belt;

a correction device that corrects the detection patterns detected by said first detecting device based on the quantity of reflection light from said endless belt itself detected by said first detecting device; and

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

an image adjusting device that adjusts at least one image forming condition of said image forming unit based on the corrected detection result of the detection patterns;

wherein said first detecting device detects the quantity of reflection light from said endless belt itself in timing at which the detection patterns are detected by said second detecting device, other than at which the at least one image forming conditions is adjusted by said image adjusting device.

15. (New) An image forming apparatus comprising:

an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

a plurality of image adjusting devices that adjust image forming conditions of said image forming unit, said image adjusting devices including a first image adjusting device and a second image adjusting device;

a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

a detecting device that detects the detection patterns formed on said endless belt and a quantity of reflection light from said endless belt; and

a correction device that corrects the detection patterns detected by said detecting device based on the quantity of reflection light from said endless belt detected by said detecting device;

wherein:

said first image adjusting device adjusts one of the image forming conditions of said image forming unit based on the corrected detection result of the detection patterns;

said second image adjusting device adjusts another one of the image forming conditions of said image forming unit, and comprises a device that rotates said endless belt and a device that forms images on said endless belt at locations other than locations at which the predetermined detection patterns are formed; and

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

said detecting device detects the quantity of reflection light from said endless belt in timing synchronous with the adjustment of the other one of the image forming conditions by said second image adjusting device.

16. (New) An image forming apparatus comprising:

an image forming unit including an image carrier disposed to be exposed to light to have a latent image formed thereon, an electrostatic charger that charges said image carrier to a predetermined polarity, a developing device that visualizes the latent image formed on said image carrier to form a visible image, and an endless belt onto which the visible image is transferred;

a plurality of image adjusting devices that adjust image forming conditions of said image forming unit, said image adjusting devices including a first image adjusting device and a second image adjusting device;

a detection pattern forming device that controls said image forming unit to form predetermined detection patterns on said endless belt;

a detecting device that detects the detection patterns formed on said endless belt and a quantity of reflection light from said endless belt, and density patches formed on said endless belt as the predetermined detection patterns; and

a correction device that corrects the detection patterns detected by said detecting device based on the quantity of reflection light from said endless belt detected by said detecting device;

wherein:

said first image adjusting device adjusts one of the image forming conditions of said image forming unit based on the corrected detection result of the detection patterns, and adjusts the one of the image forming conditions of said image forming unit based on the detected density patches, to adjust density of an image to be formed;

said second image adjusting device adjusts another one of the image forming conditions of said image forming unit and comprises an image writing position adjusting device that adjusts a writing position for an image; and

said detecting device detects the quantity of reflection light from said endless belt in

SN.10/673,918

ATTORNEY DOCKET NO. CANO:092

timing synchronous with the adjustment of the other one of the image forming conditions by said second image adjusting device.